

National Climate Assessment includes key messages about human health

By Paula Whitacre

The U.S. Global Change Research Program (GCRP), comprising 13 federal agencies, released its Third National Climate Assessment (NCA) May 6, with the message that climate change, once considered an issue for the distant future, has moved firmly into the present, with impacts on human health. NIEHS was an active player in developing the health-related aspects of the assessment and continues to provide technical input and support in follow-through activities.

Different from previous assessments

A 60-member federal advisory committee and more than 300 experts produced the NCA, which looks at climate change in the U.S. across sectors, such as agriculture, energy, and health, as well as geographic regions. "The real importance of this NCA report, compared to the previous two, is that it is very much oriented to the general public," said John Balbus, M.D., NIEHS senior advisor for public health, who was a lead author for the human health chapter. "People are much more engaged than with previous assessments," he said.

Kimberly Thigpen Tart, J.D., program analyst in NIEHS Office of Policy, Planning, and Evaluation, was involved in agency review and dissemination of the NCA. "This assessment focused on creating more than just another document," she said. "We also developed an ongoing, sustainable process for looking at climate change impacts across the country."

As part of the strategy to reach a more general audience, the GCRP [website](http://www.globalchange.gov/), (<http://www.globalchange.gov/>)

noted Balbus, is deliberately visual and interactive, with graphics and short summaries of key points (see example below). The report received extensive media attention, from front pages of newspapers to lead stories on evening newscasts, and as a trending topic on Twitter. Moreover, the coverage often emphasized health, such as the effects of climate change on allergens, asthma, and vector-borne diseases.

Health in the NCA

The chapter on health includes four key messages related to human health (see [text box](#) below) and discusses existing and emerging threats, as well as the potential for reducing the severity of future climate change. Such reduction would provide immediate health benefits.

Health was covered in the 2000 and 2009 assessments, but in the current assessment, the role of NIEHS in providing subject matter expertise has been expanded, according to Balbus. NIEHS developed a literature database to assist the authors of the health chapter. In addition, the Interagency Crosscutting Group on Climate Change and Human Health, which NIEHS co-chairs, supported workshops in the northwestern and southeastern U.S. that provided technical input.

NIEHS supports research, and contributes scientific information, to policy [activities](#) related to climate change and human health. The Institute is also actively engaged in an interim assessment on climate change and human health. Balbus expects that this effort to include quantitative assessments on health impacts will rely in part on the work of NIEHS grantees (see [story](#)).

The interim assessment is further supported by a project of the President's Task Force on Environmental Health Risks and Safety Risks to Children. The task force, of which NIEHS is part, will convene this summer to discuss the particular impacts of climate change on children.

Global connections

The NCA focuses on the U.S., but makes clear that climate change is a global health problem. As a World Health Organization (WHO) Collaborating Centre for Environmental Health (see [story](#)), NIEHS is sharing the findings with counterparts in other countries.



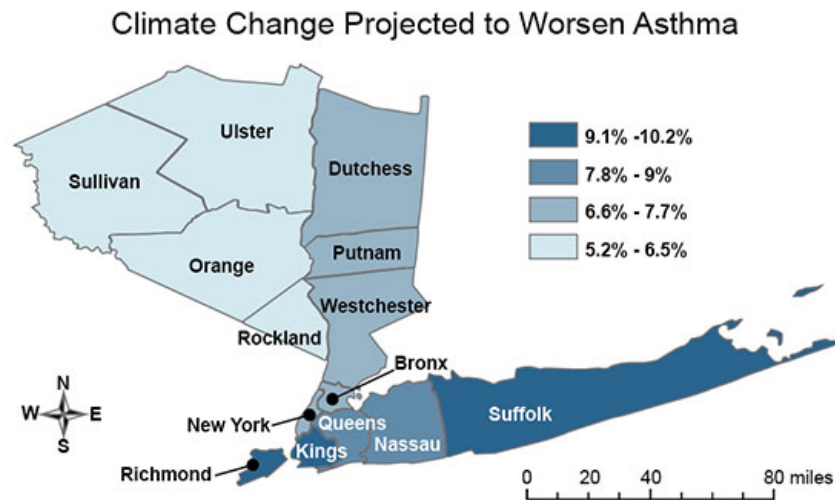
His role with the NCA is only one of the NIEHS efforts on climate change that Balbus oversees. (Photo courtesy of Steve McCaw)



Thigpen Tart, along with Balbus, is an NIEHS contact for the NCA, and supports NIEHS global environmental health activities, a theme of the Institute's 2012-2017 [Strategic Plan](#). (Photo courtesy of Steve McCaw)

Balbus noted that WHO discussed the issues of climate change and air pollution at its 67th session of the World Health Assembly in mid-May. "The NCA gave HHS Secretary Sebelius and Assistant Secretary Howard Koh, M.D., some important messages and information to bring to the world," said Balbus.

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NCA, [Chapter 9](#),
(<http://nca2014.globalchange.gov/report/sectors/human-health#statement-16518>)
, Figure 9.1: Projected increases in temperature, changes in wind patterns, and ecosystem changes will all affect future ground-level ozone concentrations. Climate projections using an increasing emissions scenario suggest that ozone concentrations in the New York metropolitan region will increase because of future climate change. This figure shows the estimated increase in ozone-related emergency room visits for children in New York in the 2020s (compared to the mid-1990s) resulting from climate change-related increases in ozone concentrations. Figure source: [Sheffield PE, Knowlton K, Carr JL, Kinney PL](#).
(<http://www.ncbi.nlm.nih.gov/pubmed/21855738>)
2011. Modeling of regional climate change effects on ground-level ozone and childhood asthma. *Am J Prev Med* 41(3):251-257.

Balbus wins HHS Green Champion Award

The Department of Health and Human Services (HHS) selected Balbus for the Good Neighbor Award for his work developing the Sustainable and Climate Resilient Healthcare Facilities Initiative, as part of the President's Climate Action Plan, released in June 2013.

The Good Neighbor Award is one of the annual HHS Green Champion awards (see related [story](#)), which recognize efforts that support sustainability and climate resilience. Combined with his leadership role on the health effects portion of the NCA, this award demonstrates that Balbus is sincere and proactive when it comes to responding to climate change.

"In developing the Sustainable and Climate Resilient Healthcare Facilities Initiative, Dr. Balbus identified an urgent need for hospitals and other health care facilities to prepare for and adapt to global climate change," states the award, in part.

Congratulations, and a hearty thanks for helping healthcare facilities be prepared for the consequences of global climate change.

NCA key messages on human health
(<http://www.globalchange.gov/explore/human-health>)

1. **Climate change threatens human health and well-being in many ways**, including impacts from increased extreme weather events, wildfire, decreased air quality, threats to mental health, and illnesses transmitted by food, water, and disease-carriers, such as mosquitoes and ticks. Some of these health impacts are already underway in the U.S.
2. **Climate change will, absent other changes, amplify some of the existing health threats the nation now faces.** Certain people and communities are especially vulnerable, including children, the elderly, the sick, the poor, and some communities of color.
3. **Public health actions, especially preparedness and prevention, can do much to protect people from some of the impacts of climate change.** Early action provides the largest health benefits. As threats increase, our ability to adapt to future changes may be limited.
4. **Responding to climate change provides opportunities to improve human health and well-being across many sectors**, including energy, agriculture, and transportation. Many of these strategies offer a variety of benefits, protecting people while combating climate change and providing other societal benefits.

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